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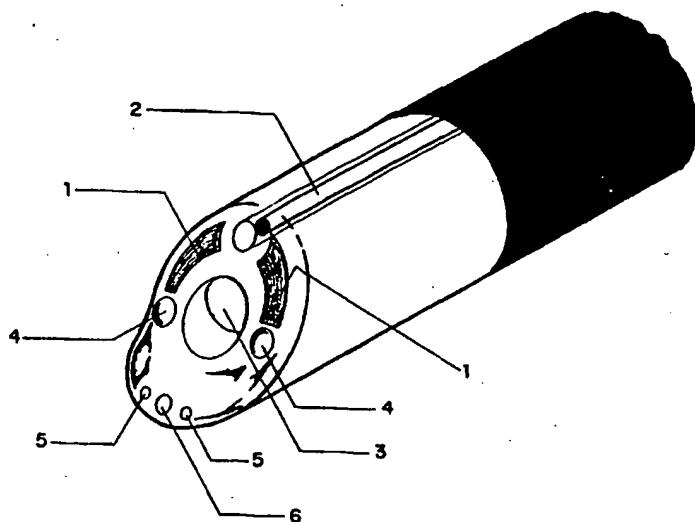


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(21) International Application Number: PCT/BR93/00036 (22) International Filing Date: 20 October 1993 (20.10.93) (71)(72) Applicant and Inventor: CORRÊA, Marco, Aurélio, Moura de Faria [BR/BR]; Rua Sinimbú No. 117, Apt. 201, 91470-470-Porto Alegre, RS (BR).		(81) Designated States: DE, JP, US. Published <i>With international search report.</i>

(54) Title: SURGICAL INSTRUMENT TO PERFORM SUBCUTANEOUS ENDOSCOPIC SURGERY

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(57) Abstract

This invention is a medical surgical instrument to perform endoscopic plastic surgery without use of insufflatable gas techniques, avoiding the risk of gas embolization. This instrument has as a working head a blunt/sharp dissector with an optical system (4), illumination source (1), irrigation source (6), aspiration source (5), instrumentation channels (3) for cutting cauterization and suturing instruments, and channels for elevators/retractors (2) that can create a workspace at the subcutaneous tissue without use of gas.

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- 1 -

SURGICAL INSTRUMENT TO PERFORM SUBCUTANEOUS ENDOSCOPIC SURGERY

This invent is a surgical instrument to perform endoscopic surgery in the subcutaneous tissue. It has a workhead that can perform the funções of visualization, irrigation, aspiracion, cutting, cauterization, 05 instrumentation in the subcutaneous tissue, and can criate its own work space without use of insuflate gas.

The Endoscopic Surgery Technics has been used in General Surgery, Ginecology, Ortopedics, and its advantages over the tradicional surgical technics has been shwoed in these 10 diferents fields.

Endoscopic Surgery Technique allow a more confortable position to the surgeon; the amplification of images seen in the video monitor make it more safe; delicate procedures can be performed trought small incisions, all specific 15 advantages so diserable in Cosmetic Plastic Surgery.

Videoendoscopic technique has been developed in inner cavities and anatomical spaces that cam bee expanded by gases (peritoneal and pleural cavities) because a work space is required between the optical sisten and the 20 tissues for the purposes of ilumunation, capture of images and execution of procedures.

Working at the subcutaneous tissue the surgeon necessary must cut a many vessels In this way the traditional

- 2 -

Endoscopic Gas Infuflator Methods are a dangerous step due to the a risk of gas embolization, its dispersion and toxicity.

This device is a medical surgical instrument to bee used
05 in Endoscopic Plastic Surgery, the "so called" SUBCUTANEOUSTOMOSCOPE that allow to work at the subcutaneous tissue through small incision without use of gases because it can criate its own work space avoiting the risk of gas embolous.

10 The caracteristic of this instrument are a "workhead" like a nave or capsul that can perform a blump/sharp disseccion at the subcutaneous tissue under monitor view, and can perform Subcutaneous Endoscopic Surgery through accesory canals providing instrumentation source, ligh
15 source, cut/cauterization, aspiration sources. It have separators/elevators and can cried its own workspace, avoiting the use of insuflate gas technics and its riks.

Diferents prototypes were built and experimental surgery has been done on d ogs, pigs, and cadaveres, and the
20 viability of the method has been proved; we can perform axilary nodes and braquial plexus endoscopic exploration, the mapping out of a cutaneous flap through endoscopic plus transilumination view, flaps pedicules diseccions,etc.

We have used this instrument to perform Aesthetic Plastic
25 Surgery through small incisions and I have developed and describeb endoscopic technics to Abdomenoplasty and Mammoplasty

- 3 -

The "so called" Subcutaneoustomosope have the following advantages:

- a) Avoid the risk of gas embolization and toxicity of the Videolaparoscopic technique;
- 05 b) Provide dissection and visualization simultaneously
- c) bring to the Plastic Surgery the advantages of a minimal invasive surgery such as: less tissue trauma , decreased rates of infection, less hospitalization time, and a small scars so desirable when dealing with Cosmetic
- 10 Surgery.

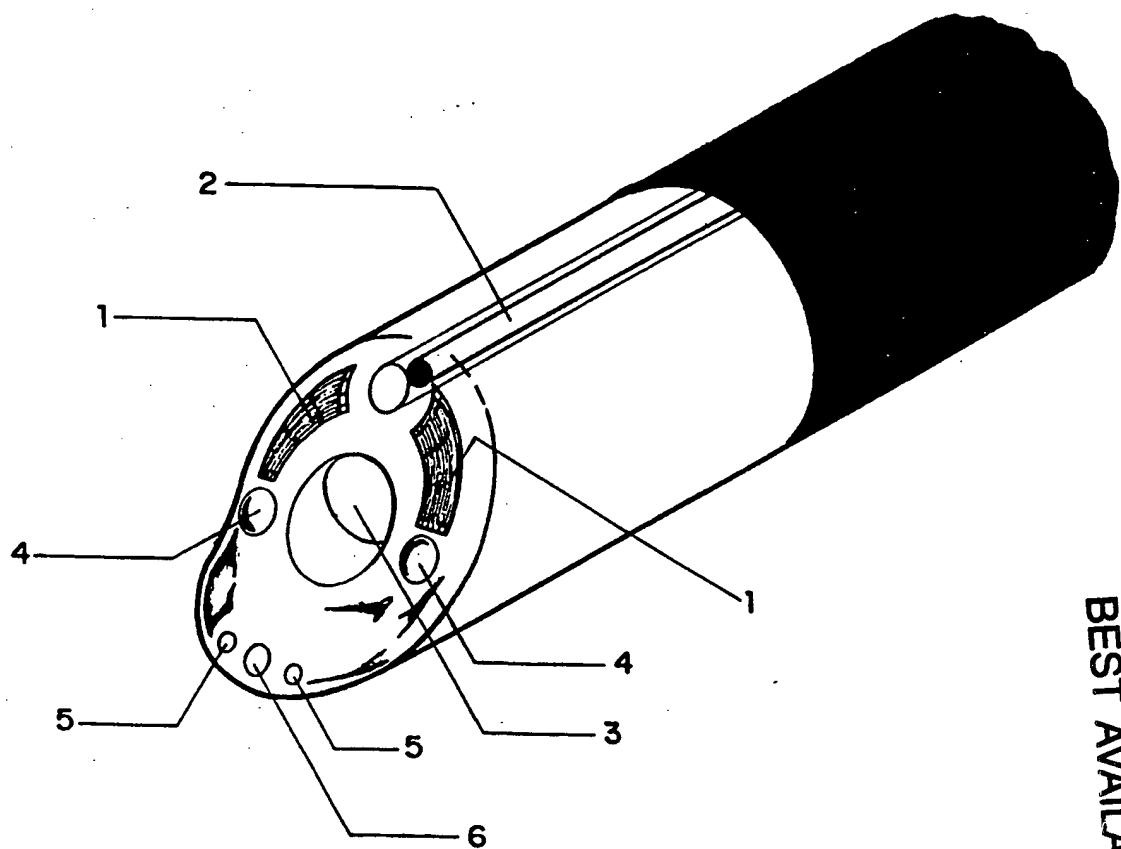
In order to help the full understanding of the conception of this instrument, it will be explained and presented by same simple designs.

- 4 -

CLAIM

1- Medical Surgical Instrument to be used in Endoscopic Plastic Surgery without use of insuflatable gas avoiding the risk of gas embolization characterized by to bee a
5- blump/sharp dissector workhead (fig.) provided of a optical system (4), ilumination source(1), irrigation source(6), aspiration source(5), a instrumentation channel to cut/cauterization/suture(3), and elevators/separators to criate a subcutaneous workspace withouth use of gas.

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INTERNATIONAL SEARCH REPORT

International Application No PCT/BR 93/00036

A. CLASSIFICATION OF SUBJECT MATTER IPC 6 A61B17/02 A61B17/32 A61B17/34

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 6 A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO,A,92 12680 (LASERSCOPE) 6 August 1992 see page 14, paragraph 2 - page 15, paragraph 3; figures 4,7-9 ---	1
A	WO,A,87 01276 (SONOMED) 12 March 1987 see page 25, paragraph 1; figures 4,6,7 ---	1
A	US,A,5 245 987 (REDMOND) 21 September 1993 see abstract; figures 1,6 ---	1
A	DE,C,35 04 292 (WOLF) 24 July 1986 see figure 4 ---	1
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Date of mailing of the international search report
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Barton, S

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/BR 93/00036

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
WO-A-9212680	06-08-92	AU-A-	1418492	27-08-92
WO-A-8701276	12-03-87	US-A- CA-A- CA-A- DE-D- EP-A- JP-T- US-A- US-A-	4750902 1304639 1318000 3689308 0233940 63500850 4750488 4922902	14-06-88 07-07-92 18-05-93 23-12-93 02-09-87 31-03-88 14-06-88 08-05-90
US-A-5245987	21-09-93	WO-A-	9403114	17-02-94
DE-C-3504292	24-07-86	FR-A- GB-A,B US-A-	2577132 2170715 4686965	14-08-86 13-08-86 18-08-87
US-A-4760840	02-08-88	NONE		